

**REMARKS/ARGUMENTS**

Claims 1 - 4 are pending in the application.

Claims 1 and its dependent claims have been amended to improve the form thereof.

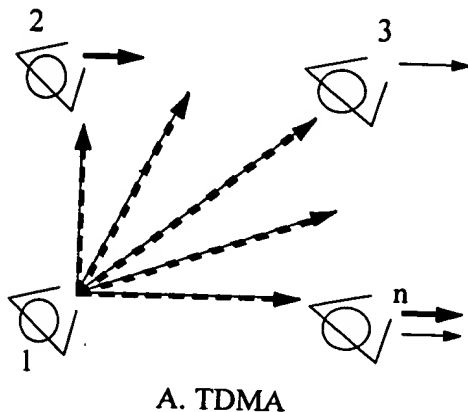
The drawings have been amended to label Figures 1, 2, 3 and 4 as prior art.

The abstract has been revised as required by the Examiner.

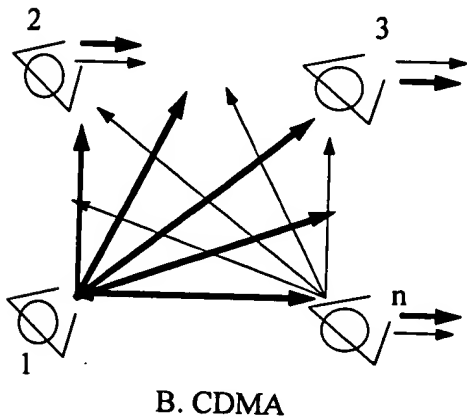
The claims have been amended to improve the form thereof. The specification has been amended to correct a typographical error.

Keeping in mind that claims 1 - 4 are method claims, these claims recite a high data rate inter-satellite communications links method for a plurality of satellites in which each satellite is provided with an ultrafast time hopping wireless satellite communications link of an allowed bandwidth. The specification

describes Figures 5A and 5B (reproduced to the left hereof for convenience of reference) as follows:



In Figure 5A, satellite 1 transmits to satellites 2, 3, ...,  $n$ , utilizing 2 slaved time hopping coding schemes the timing of which is represented by arrow thickness. Satellite 2 receives on one channel formed by one set of orthogonal codes represented by the thick arrow; satellite 3 receives on another channel formed by another set of orthogonal codes represented by thin arrow; and satellite  $n$  receives on both channels. The network is linked by a TDMA protocol.



In Figure 5B, satellites 1 and  $n$  both transmit at the same time. Satellite 1 transmits on a channel formed by one set of orthogonal codes represented by thick arrows; simultaneously, satellite  $n$  transmits on another channel formed by another set of orthogonal codes represented by thin arrows. Satellites 2 and 3 receive both channels from satellites 1 and  $n$  and are able to distinguish information sent on either channel. The network is linked by a CDMA protocol.

Fig. 5.

There are many possible embodiments of an ultrafast time hopping satellite communications system. The following is an example embodiment which permits multichannel (high data rate) use.

Thus, the drawings, to the extent possible for method claims, show every feature of the invention specified in the claims. It is respectfully submitted that no drawing corrections are necessary for Figures 5A and 5B.

The rejection of claims 1 - 4 under 35 U.S.C. §112, second paragraph, is respectfully traversed.

Note in particular that claim 1 specifies first:

"...providing, for each satellite, an ultrafast time hopping wireless satellite communications link of an allowed bandwidth in which data is transmitted using individual packets or pulses in a sequence of such packets or pulses"

and, secondly,

"...causing said individual packets or pulses to be short in duration so that the individual packets are pulsed and signal energy is spread over said allowed bandwidth substantially simultaneously and instantaneously."


Thus, there are two broad method steps recited in the claims, and the Examiner is incorrect in stating that the claim merely recites the use without any active positive steps. Two positive steps are recited.

For the same reason, the rejection of claims 1 - 4 under 35 U.S.C. §101 allegedly because the claimed "recitation of a use, without setting forth any steps involved in the process" incorrectly ignores the two-step process shown above.

The rejection of claims 1 - 4 under 35 U.S.C. §102 as being anticipated by Barrett (US 5,610,907), applicant's own patent, is respectfully traversed. It should be noted that applicant's patent does not disclose an ultrafast inter-satellite communications link. The term "satellite communication link" does not even appear in the patent. Hence, it is no anticipation under 35 U.S.C. §102. Moreover, there is no disclosure in the aforesaid patent that signal energy is spread over the allowed bandwidth "substantially

simultaneously and instantaneously." Therefore, the Examiner has erred in rejecting the claims under 35 U.S.C. §102(b); and further and favorable reconsideration is respectfully requested.

Respectfully submitted,

  
Jim Zegeer, Reg. No. 18,957  
Attorney for Applicant

Suite 108  
801 North Pitt Street  
Alexandria, VA 22314  
Telephone: 703-684-8333

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In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.



09/672,707

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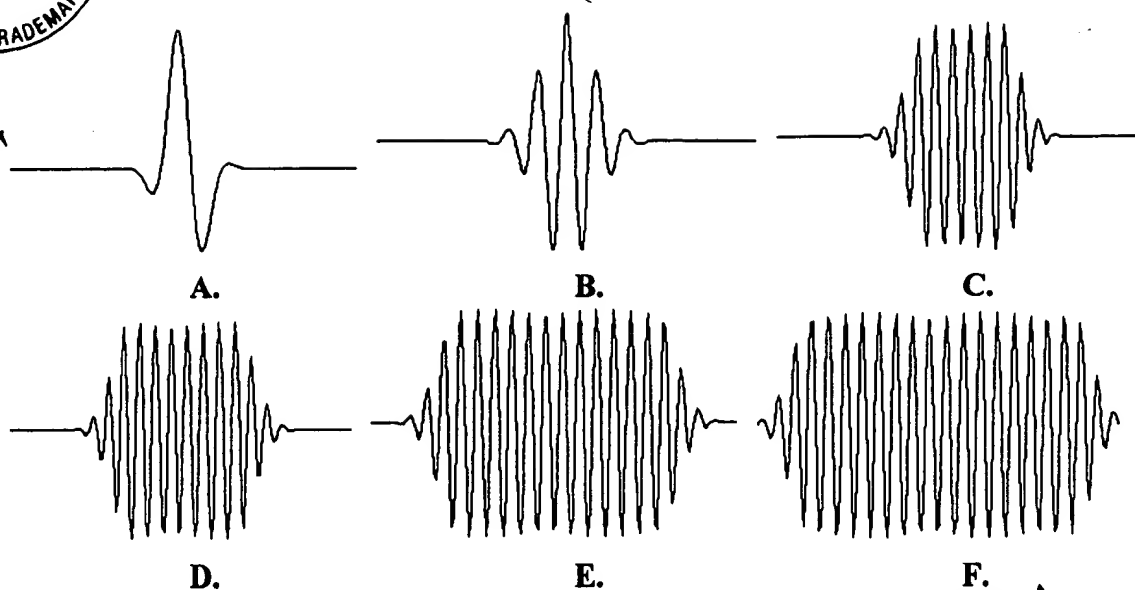


Fig. 1. (PRIOR ART)

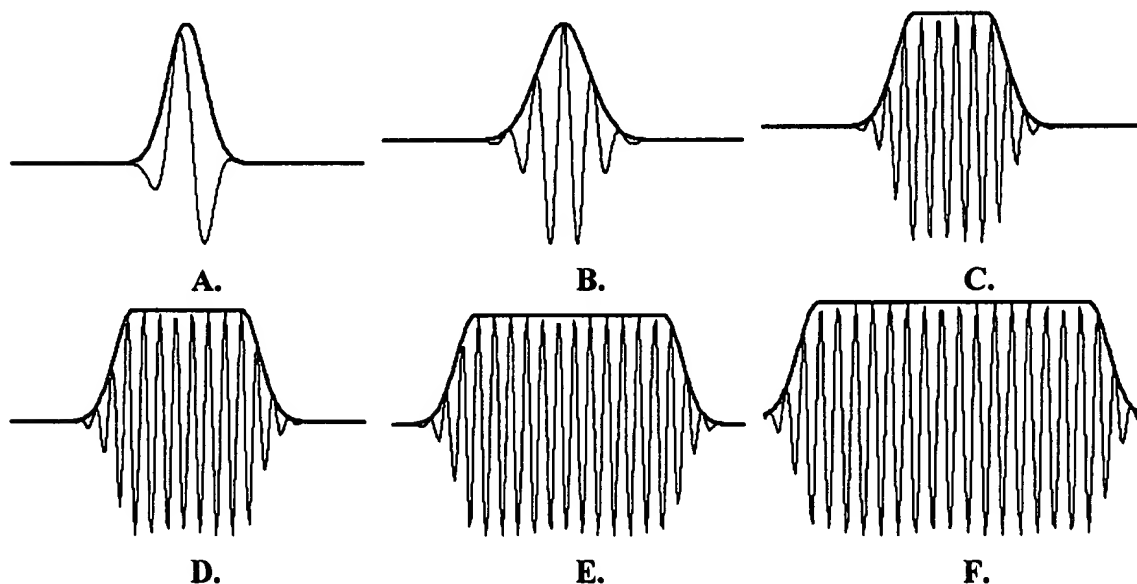


Fig. 2. (PRIOR ART)



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### Bandwidth Efficiency

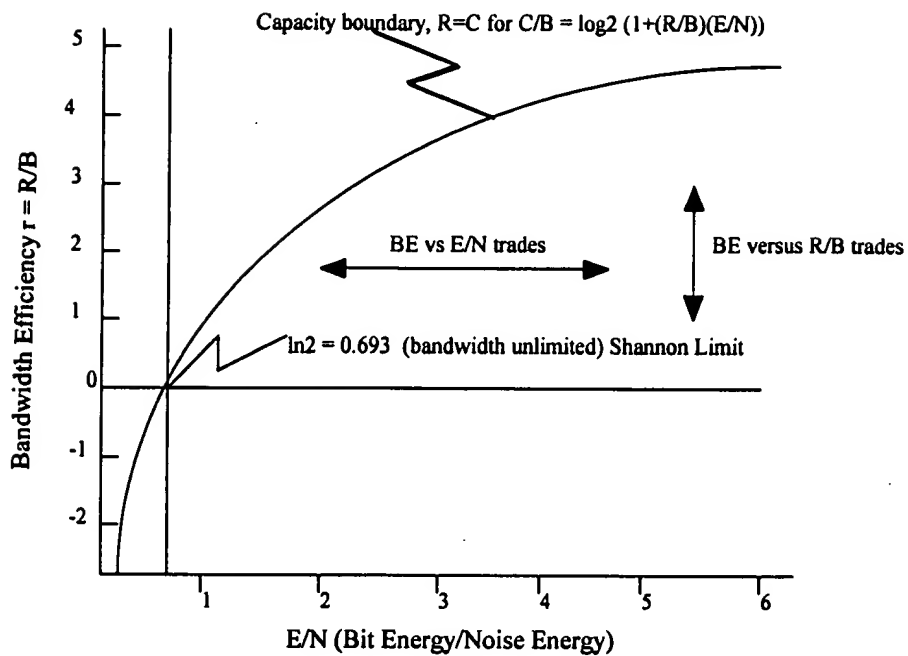


Fig. 3. (PRIOR ART)

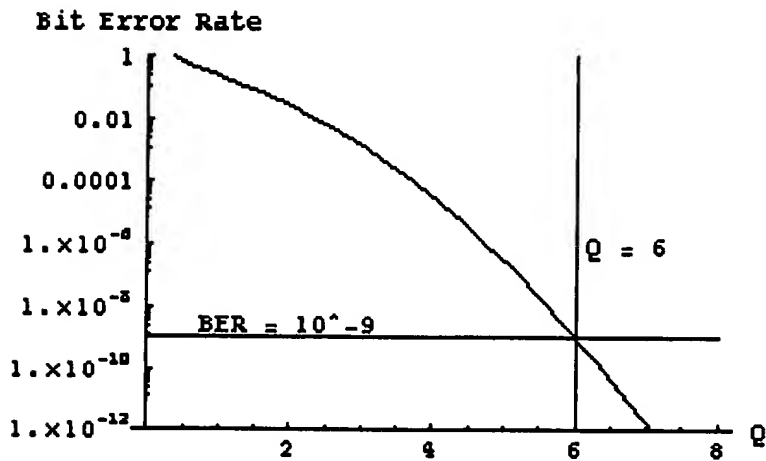


Fig. 4. (PRIOR ART)